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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,934	01/09/2004	Jack P. Wade	ZMIC-600	9235

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EXAMINER

SCHNEIDER, JOSHUA D

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 03/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/754,934	Applicant(s) WADE ET AL.	
	Examiner Joshua D. Schneider	Art Unit 2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/9/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-12 and 14-16 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application Publication 2003/0110330 to Fujie et al.

3. With regards to claims 1, 4, 11, and 12, Fujie teaches a housing for holding a plurality of disk drives (Fig. 1, element 10); a connector mounted to the housing (Fig. 2, elements 24 and 40); a plurality of disk drives disposed in the housing (Fig. 2, elements 36a-h), and each drive having an I/O channel (Fig. 2, line connecting elements 36 and 38); a plurality of switches disposed within the housing (Fig. 2, elements 38), each switch having at least three ports (Fig. 2, lines connecting elements 36 and 38, and elements 38, 32, and 48); wherein the I/O channel each disk drives is coupled with a first port of a corresponding switch of the plurality of switches, wherein the plurality of switches are selectively controllable such that the I/O channel of the disk drive which is coupled to the first port of the switch is coupled with either the a second port or a third port of the switch (paragraphs 39-44); and wherein the second port and the third port of the switches area coupled with the connector, such that data from the I/O channel of the drive can be transmitted through the connector from either the second port or the third port of the switch (paragraphs 39-44).

Art Unit: 2182

4. With regards to claims 2 and 8, Fujie teaches the plurality of disk drives includes at least for disk drives (Fig. 2, elements 36a-h), and the plurality of switches includes at least four switches (Fig. 2, elements 38).

5. With regards to claims 3 and 9, Fujie teaches the I/O channel for each of the disk drives is a serial communication channel (paragraph 42).

6. With regards to claim 5, Fujie teaches a docking base unit having an A channel and a B channel for each of the plurality of disk drives (Fig. 1, elements 14 and 16, Fig. 2, elements 28 and 42); wherein the A channels of the docking base unit are coupled with a first computer, and the B channels of the docking base unit are coupled with a second computer (Fig. 1, elements 14 and 16, Fig. 2, elements 28 and 42); and wherein the A channels are coupled with the second port of the plurality of switches, and the B channels are coupled with the third port of the plurality of switches (Fig. 2, elements 28, 32, 42, and 48).

7. With regards to claim 6, Fujie teaches the controller is coupled with the first computer and the second computer, and based signals received from the first computer and the second computer, the controller causes the plurality of switches to be in a first position, or in a second position (paragraphs 39-42).

8. With regards to claim 7, Fujie teaches when the plurality of switches are in a first position the I/O channels of the plurality of drives are coupled with the A channels of the docking base unit, and when the plurality of switches are in a second position the V0 channels of the plurality of drives are coupled with the B channels of the docking base unit (Fig. 2, elements 28, 32, 42, and 48, paragraphs 39-44).

9. With regards to claim 10, Fujie teaches the plurality of disk drives are configured for RAID operation (paragraph 33).
10. With regards to claim 14, Fujie teaches the docking base unit includes plurality of Serial ATA connectors, and each of the channels of the plurality of pairs of channels is coupled to either one of the first computer or the second computer by one of the plurality of serial ATA connectors (Figs. 1 and 2, paragraphs 40-44).
11. With regards to claim 15, Fujie teaches a controller (Figs. 1 and 2, elements 14 and 16, paragraphs 41-47), which is coupled with the plurality of switches, and controls the switches such that the plurality of switches connect I/O channels of the plurality of drives with either the first channel of the second channel of the pair of V0 channels corresponding to each of the plurality of drives (paragraphs 41-47).
12. With regards to claim 16, Fujie teaches a first connector for receiving a signals from the first computer, and a second connector for receiving signals from the second computer, wherein based on the signals from the first computer and the second computer, the controller operates to cause each of the plurality of switches to connect the I/O channel for each of the plurality of drives, with either the first computer or the second computer (paragraphs 39-47).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2182

14. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2003/0110330 to Fujie et al. in further view of U.S. Patent 5,455,934 to Holland et al.

15. With regards to claim 13, Fujie teaches the docking base unit having connections from first and second computers having first and second RAID controllers, but does not teach the use of the I2C bus interfaces. The I2C bus is a well known standard. Holland teaches the use of an I2C bus to connect to RAID storage modules (column 7, lines 55-64). The PCI bus standard was notoriously well known in the art at the time of invention. It would have been obvious to use the well known bus standards PCI and I2C to create connections between a Host RAID controller and a RAID storage controller such as that taught by Fujie in order to enhance market compatibility by taking advantage of known equivalent transfer modes.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 6,578,158 to Deitz teaches a Host to disk array access system with multiple paths for failover. U.S. Patent 6,542,961 to Matsunami et al. teaches a multiple host multiple disk system with multiple switches forming multiple paths. U.S. Patent 6,370,605 to Chong, Jr. teaches multiple host multiple disk system with multiple switches forming multiple paths. U.S. Patent Application Publication 2004/0083338 to Moriwaki et al. multiple host multiple disk system with multiple switches forming multiple paths.


Art Unit: 2182

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua D. Schneider whose telephone number is (571) 272-4158. The examiner can normally be reached on M-F, 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JDS


KIM HUYNH
SUPERVISORY PATENT EXAMINER
2/17/06